

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number
WO 2005/048985 A2

(51) International Patent Classification⁷: **A61K 9/12**

CA 94619 (US). BATHURST, Ian C. [US/US]; 1626 Hibbard Street, Alameda, CA 94501 (US).

(21) International Application Number:
PCT/US2004/038650

(74) Agents: **CHOI, Jane J.** et al.; One Baxter Parkway - DF3-2E, Deerfield, IL 60015 (US).

(22) International Filing Date:
11 November 2004 (11.11.2004)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/520,549 14 November 2003 (14.11.2003) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants (*for all designated States except US*): **BAXTER INTERNATIONAL INC.** [US/US]; One Baxter Parkway, Deerfield, Illinois 60015 (US). **BAXTER HEALTHCARE S.A.** [CH/CH]; Hertistrasse 2, Wallisellen, Kanton, CH-8304 Zurich (CH). **ARRIVA PHARMACEUTICALS INC.** [US/US]; 2020 Challenger Drive, Alameda, California 94501 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **DURRANI, Manzer J.** [US/US]; 8290 Cleary Boulevard, Villa #2906, Plantation, FL 33324 (US). **KUMAR, Harish** [US/US]; 2056 McGarvey Street, Fullerton, CA 92833 (US). **KREIGER, Timothy** [US/US]; 75 Bedford Avenue, Lowell, MA 01854 (US). **KABINGUE, Ken** [US/US]; 5146 Windermere Avenue, Los Angeles, CA 90041 (US). **MOSHER, Virginia** [US/US]; 27011 Harrill Lane, Lebanon, MO 65536 (US). **BARR, Philip J.** [US/US]; 5602 Denton Place, Oakland,

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALPHA 1-ANTITRYPSIN COMPOSITIONS AND TREATMENT METHODS USING SUCH COMPOSITIONS

(57) Abstract: Alpha 1-antitrypsin compositions and treatment methods using such compositions for treating a variety of pulmonary diseases are provided. The compositions generally contain AAT, a stabilizing carbohydrate such as trehalose, a surfactant such as Polysorbate 80 and an antioxidant to stabilize AAT for use as a therapeutic. The formulations can be prepared as both liquids and solids and administered by nebulization of the liquid formulation or by conversion of dry powder formulation into an aerosol.



WO 2005/048985 A2